

ABSTRACT

In a system comprising a local processing device, a transmission link to a remote processing device, and a remote processing device, a method for updating a remote document in accordance with mutations made to a portion of the remote document maintained on the local processing device comprising the steps of loading at least a portion of the remote document into the local processing device as a local XML document, creating a logical document object model (DOM) having a plurality of nodes arranged in a logical hierarchical structure such that each node corresponds to an XML tag and data element in the XML document, mutating the XML document by adding, deleting, or modifying one or more of its data elements, updating the DOM to conform to the mutations to the XML document, creating a first event table that contains events corresponding to each mutation to the XML document where each entry comprises a path to a node in the DOM affected by the mutation and an event type, processing the first event table to create a second event table that contains the smallest number of events necessary to update the remote document to conform to the local XML document, transmitting the second event table and related data from the local device to the remote device, and mutating the remote document in accordance with events in said second event table and related data such that said remote document will have corresponding data elements of the same value as mutated data elements in the modified local XML document.